

*Abstract*

A cable in conduit superconductor. The superconductor is formed from bundles of superconducting strands made of superconductor filaments, copper, and a layer of electrical resistant material. The superconductor strands are organized around a solid copper central strand, and a plurality of such wires are organized within a circular stainless steel foil, leaving a spiral gap in the middle for liquid coolant to flow. This configuration is then placed within a conduit tubing and compressed for stability.